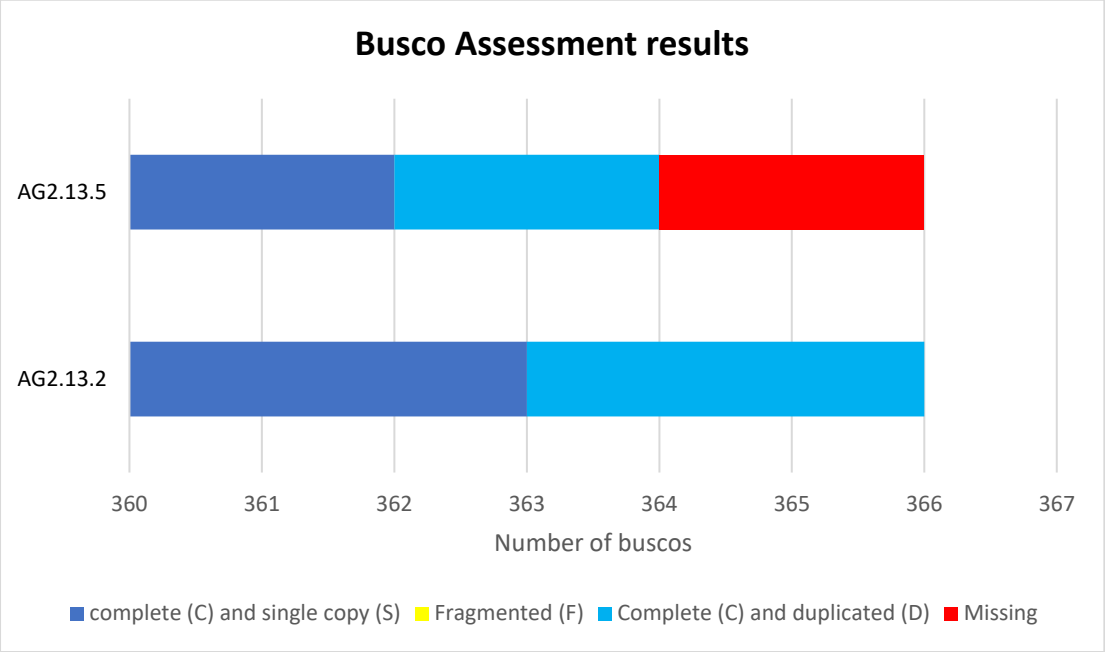

Figure S1. Busco Assessment results showing the number of copies of BUSCO genes complete (**C = 366**), complete and single copy (**S= 363**) complete and duplicated (D = 3), fragmented (**F=0**) and missing (**M =0**) (**n = 366**) in strain AG2.13.2 and complete (**C = 364**), complete and single copy (**S= 362**) complete and duplicated **(D = 2)**, fragmented (**F=0**) and missing (**M =2**) (**n = 366**) in strain AG2.13.5. .

Table S1. List of genomes downloaded from the NCBI- Characteristics of the strains selected for genome similarity assessments and comparisons.

Strain	GeneBank Assembly Accession number	Observations	Host/isolation source	Location	Date of isolation
A. salmonicida A527	GCA_002764135.1	Mesophilic	*Macrobrachium rosenbergii*	Mumbai, India	May 2007
A. salmonicida Y47	GCA_001481535.2	Mesophilic	*Gallus domesticus*	Mumbai, India	January 2006 to March 2008
A. salmonicida Y567	GCA_001466435.1	Mesophilic	Fish	Mumbai, India	January 2006 to March 2008
A. salmonicida Y577	GCA_001481545.2	Mesophilic	Fish	Mumbai, India	January 2006 to March 2008
A. salmonicida pectinolyitica 34mel	GCA_000447435.2	Mesophilic, pigment producer	Heavily polluted water, Matanza river	Buenos Aires, Argentina	1988
A. salmonicida SWR-OG1	GCA_012931585.1	Mesophilic	*Epinephelus coioides*	Southern China Zhangzhou city, Fujian province	April 2018
A. salmonicida O23A	GCA_002180335.1	Dissimilatory arsenate reductase gene	Rock biofilm and bottom sediments	Zloty Stok gold mine in south-west Poland	2010
A. salmonicida S121	GCA_002214245.1	Unavailable. Most likely belonging to *salmonicida* subspecies	*Salmo salar*	Yantai, China	August 2015
A. salmonicida masoucida RZ6S-1	GCA_019443825.1	Intermediate	*Scophthalmus maximus*	Yantai, China	December 2016
A. salmonicida salmonicida J409	GCA_009858115.1	Unavailable	*Anoplopoma fimbria*	British Columbia, Vancouver, Canadá	2018

A. salmonicida salmonicida A449	GCA_000196395.1	Psychrophilic	*Salmo trutta*	Eure river, France	1975
A. salmonicida salmonicida SHY16-3432	GCA_008370735.1	Psychrophilic	*Salvelinus fontinalis*	Quebec, Canadá	2016
A. salmonicida AS1	GCA_029153695.1	Psychrophilic	Duck meat	Shandong, China	2016
A. media T0.1-19	GCA_013085485.1	Misidentified	Sludge from bioreactor treating oxytetracycline bearing wastewater	Beijing, China	April 2016
A. media T5-1	GCA_019455365.1	Misidentified	Biofilm of synthetic bioreactor under oxytetracycline stress	Beijing, China	May 2017
A. media E31	GCA_016653695.1		Water	Jinan, China	May 2018
A. media WS	GCA_000287215.3	High levels of melanin	Water	East Lake, Wuhan, Hubei, China	2003
A. media R25-3	GCA_013085765.1	Synthetic bioreactors under oxytetracycline stress	Sludge from bioreactor treating oxytetracycline bearing wastewater	Beijing, China	October 2017
A. media R1-18	GCA_013085725.1	Synthetic bioreactors under oxytetracycline stress	Sludge from bioreactor treating oxytetracycline bearing wastewater	Beijing, China	May 2016
A. media R1-26	GCA_014109865.1	Synthetic bioreactors under oxytetracycline stress	Biofilm reactor	China	July 2018
Aeromonas rivipollensis KN-Mc-11N1	GCA_003015165.1		*Myocastor coypus*	Nakdong River, South Korea	July 2017
Aeromonas rivipollensis G42	GCA_010974915.1		Water	Johannesburg, South Africa	March 2018
Aeromonas veronii bv *sobria* AG5.28.6	GCA_003367135.1		*Dicentrarchus labrax*	East Aegean Sea, Greece	November 2015
Aeromonas veronii bv *sobria* BIOO050A	GCA_004379215.1		*Dicentrarchus labrax*	East Aegean Sea, Greece	2009
Aeromonas veronii bv *sobria* NS6.15.2	GCA_004379225.1		*Dicentrarchus labrax*	West Aegean Sea, Greece	November 2015
Aeromonas veronii bv *sobria* NS	GCA_003367145.1		*Dicentrarchus labrax*	West Aegean Sea, Greece	2009
Aeromonas veronii bv *sobria* NS2	GCA_004379205.1		*Dicentrarchus labrax*	West Aegean Sea, Greece	September 2015
Aeromonas veronii bv *sobria* NS13	GCA_008119755.1		*Dicentrarchus labrax*	West Aegean Sea, Greece	2015
Aeromonas veronii bv *sobria* NS22	GCA_008119745.1		*Dicentrarchus labrax*	West Aegean Sea, Greece	September 2016
Aeromonas veronii bv *sobria* PDB	GCA_003367105.1		*Dicentrarchus labrax*	West Aegean Sea, Greece	2009
Aeromonas veronii bv *sobria* VCK1	GCA_003367095.1		*Dicentrarchus labrax*	East Aegean Sea, Greece	September 2015

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Table S2. Statistics of the genome-assembly report. 10

Strain	Platforms	Assembler	Contigs	Largest Contig (bp)	N50	GC%	coverage	Number of reads
***A. salmonicida* AG2.13.2**	Illumina	Unicycler v0.4.8	65	402.057	168.750	58.74	256.397	6214779

***A. rivipollensis* AG2.13.5**	Illumina	Unicycler v0.4.8	50	501.196	288.897	61.61	243.19	5502017

Table S3. A. salmonicida AG2.13.2 CRISPR site prediction.

CRISPR ID	Start	End	Length(bp)	Number of spacers	Direct repeat length(bp)
CRISPR2	396098	396417	319	5	23

Table S4. *A. salmonicida* AG2.13.2 PHASTER prediction.

PHASTER region	Start	End	Length(bp)	Number of Phage Hit Proteins
INCOMPLETE PROPHAGE	4627372	4669096	41,700 pb	41